What is claimed is:

1. A magnetoresistive element comprising:

a magnetoresistive film having a pinned layer, a non-magnetic layer, and a free layer;

a pair of terminals for applying a current to said magnetoresistive film; and

bias applying means for applying a bias magnetic field for magnetic domain control to said free layer,

said free layer having a sensing region and a pair of out-of-sensing-region regions on both ends of said sensing region, a magnetization direction of one of the out-of-sensing-region regions and a magnetization direction of the other out-of-sensing-region region having different components in a direction of element height, magnetization of the one of the out-of-sensing-region regions and magnetization of the other out-of-sensing-region region being nearly symmetrical relative to the sensing region interposed therebetween.

2. A magnetoresistive element comprising:

a magnetoresistive film having a pinned layer, a non-magnetic layer, and a free layer;

a pair of terminals for applying a current to said magnetoresistive film; and

bias applying means for applying a bias magnetic field for magnetic domain control to said free layer, the magnetoresistive element further comprising, if a direction of track width is designated by an x-axis, a

direction of element height orthogonal to the direction of track width is designated by a y-axis, a magnetization direction of the free layer is designated as an x-plus direction, and a direction opposite to an air bearing surface is designated as a y-plus direction:

means for generating a bias magnetic field having a component in the y-plus direction in a region of said free layer located on an x-minus side and generating a bias magnetic field having a component in a y-minus direction in a region of said free layer located on the x-plus side.

3. The magnetoresistive element of claim 2, wherein, if the magnetization direction of said free layer in said coordinate system is designated as $(\sin\theta, \cos\theta)$ and a plus direction of the x-axis is designated as (0, 1), the magnetization direction in the region of the free layer located on the x-minus side to which the bias magnetic field having the component in the y-plus direction has been applied satisfies $0 < \theta < 90$ and the magnetization direction in the region of the free layer located on the x-plus side to which the bias magnetic field having the component in the y-minus direction has been applied satisfies $270 < \theta < 360$.

4. The magnetoresistive element of claim 2, wherein said pinned layer has a magnetization direction fixed by a first antiferromagnetic layer.

5. The magnetoresistive element of claim 2,

wherein said bias applying means for applying a bias magnetic field for magnetic domain control to said free layer is disposed on each of both edges in the direction of track width of said magnetoresistive film and is composed of a second antiferromagnetic layer or a permanent magnetic layer exchange coupled to said free layer.

6. The magnetoresistive element of claim 5, wherein, if a length in a direction of the y-axis of said magnetoresistive element is designated as an element height, a height of each of said bias applying means and the free layer exchange coupled to the bias applying means is equal to or larger than a height of the free layer in a region sandwiched between the bias applying means.

7. The magnetoresistive element of claim 5, wherein a film thickness difference Δt between the left and right second antiferromagnetic layers of said bias applying means satisfies $1\ nm \leq \Delta t \leq 10\ nm$.

8. The magnetoresistive element of claim 5, wherein the left and right second antiferromagnetic layers of said bias applying means are composed of different materials.

9. The magnetoresistive element of claim 2, wherein said pair of terminals for applying a current are deposited in a direction of thickness of the magnetoresistive film either indirectly with a metal film interposed therebetween or directly without a

metal film interposed therebetween such that a current flows in the direction of the thickness of said magnetoresistive film and that the bias magnetic field is generated with said current.

10. The magnetoresistive element of claim 9, wherein a length of a sensing region is adjusted to be equal to a length in the direction of track width of said pinned layer by adjusting the length of said pinned layer to be smaller than a length in the direction of track width of said free layer and a length in the direction of track width of each of said pair of terminals for applying a current is adjusted to be larger than the length in the direction of track width of said pinned layer.